

WLJT-DT ENGINEERING STATEMENT
(Page 1 of 6)
West Tennessee Public TV Council, Inc.
Lexington, TN

The attached application is prepared on behalf of the West Tennessee Public TV Council, Inc., licensee of WLJT-DT - Lexington, Tennessee. WLJT-DT holds a construction permit (0000034926) authorizing post repack operation on Channel 27 with a maximum directional effective radiated power of 142 kilowatts to replicate as closely as possible the post-repack facilities authorized for WLJT-DT. This application is for a station license to cover the above referenced construction permit.

The Channel 27 facilities which were constructed by WLJT-DT differ from those authorized by this construction permit in that a 24 bay Jampro JA/MS-24-27-TEO elliptically polarized directional antenna was substituted for the 20 bay Jampro JA/MS-20/27-THO horizontally polarized directional antenna authorized by the construction permit. As shown in the antenna pattern information included in this exhibit, the directional pattern for this replacement antenna is identical to the directional pattern of the antenna authorized by the construction permit and the horizontally polarized ERP and antenna height remain identical to the authorized values with the addition of a vertically polarized signal component with an effective radiated power of 60.9 kilowatts. These changes are permitted without prior FCC authorization by Sections 73.1690(c)(3) and 73.1690(c)(4) of the FCC Rules.



6340 Sky Creek Drive, Sacramento, California 95828
P.O. Box 292880, Sacramento, California 95829-2880

(916) 383-1177 FAX (916) 383-1182

ANTENNA SPECIFICATIONS

MODEL: JA/MS-24/27-TEO **SERIAL #**19201-A

ELECTRICAL SPECIFICATIONS

CHANNEL: 27 (548-554 MHz)

POLARIZATION: Elliptical (70/30 H/V)

AZIMUTH PATTERN: Omnioid (Directional)

RMS GAIN: (H-pol) 16.8x / 12.25 dBd
 (V-pol) 7.2x / 8.57 dBd

PEAK GAIN: (H-pol) 28.56x / 14.56 dBd
 (V-pol) 12.24x / 10.88 dBd

BEAM TILT: 0.5°

NULL FILL: 10%

INPUT POWER: 20 kW

INPUT IMPEDANCE: 50 ohms, Nominal

MAXIMUM VSWR: 1.03:1 or better over channel 27

FIELD-ADJUSTABLE BROADBAND VSWR: 1.10:1 or better over 536-563 MHz

ELECTRICAL DE-ICER: none

INPUT CONNECTION: 6-1/8" EIA (f), Flanged

MECHANICAL/ENVIRONMENTAL SPECIFICATIONS

WEIGHT (INCLUDING MAST): 4671 lbs. (2119 kg) no ice

EFFECTIVE PROJECTED AREA (EPA): 69 ft² (6.4 m²) no ice, per TIA-222-G

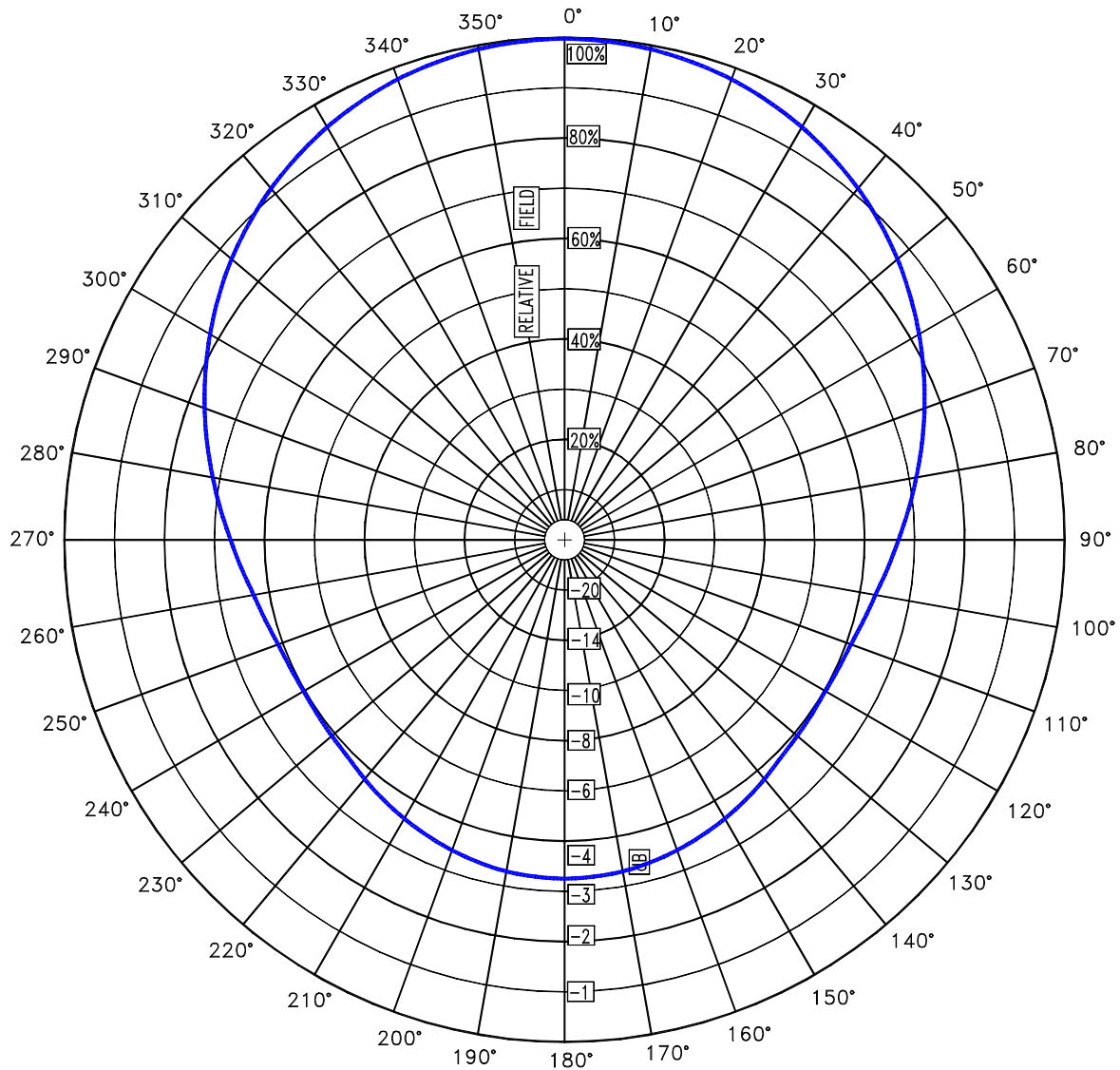
PRESSURIZATION: 10 psi max, 3-5 psi operating

ANTI-ICING PROTECTION: Radome



6340 Sky Creek Drive
Sacramento, California 95828 USA

Telephone (916) 383-1177
Fax (916) 383-1182



Customer: WLJT-TV (Main)
Channel: 27

Model: JA/MS-24/27 TEO
Description: UHF Slot Antenna
Notes: Elliptically Polarized, H-Pol



6340 Sky Creek Drive
Sacramento, California 95828 USA

Telephone (916) 383-1177
Fax (916) 383-1182

<u>AZIMUTH</u>	<u>FIELD</u>	<u>dB</u>
0	1.000	0.00
10	0.994	-0.05
20	0.978	-0.19
30	0.951	-0.44
40	0.915	-0.77
50	0.871	-1.20
60	0.820	-1.72
70	0.767	-2.30
80	0.715	-2.91
90	0.668	-3.50
100	0.631	-4.00
110	0.609	-4.31
120	0.602	-4.41
130	0.608	-4.32
140	0.623	-4.11
150	0.642	-3.85
160	0.659	-3.62
170	0.672	-3.45
180	0.676	-3.40
190	0.672	-3.45
200	0.659	-3.62
210	0.642	-3.85
220	0.623	-4.11
230	0.608	-4.32
240	0.602	-4.41
250	0.609	-4.31
260	0.631	-4.00
270	0.668	-3.50
280	0.715	-2.91
290	0.767	-2.30
300	0.820	-1.72
310	0.871	-1.20
320	0.915	-0.77
330	0.951	-0.44
340	0.978	-0.19
350	0.994	-0.05

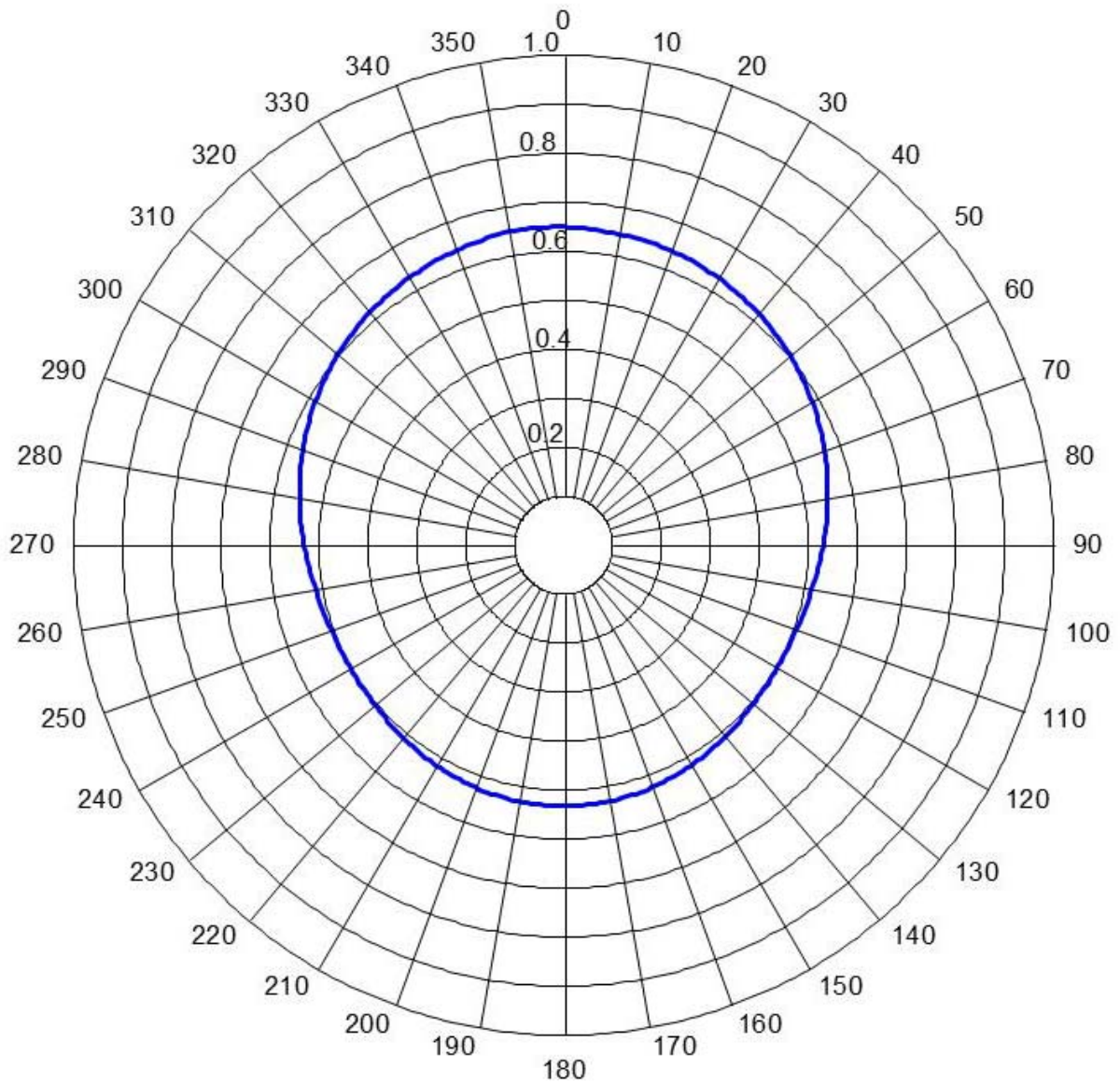
Customer: WLJT-TV (Main)
Channel: 27

Model: JA/MS-24/27 TEO
Description: UHF Slot Antenna
Notes: Elliptically Polarized, H-Pol



6340 Sky Creek Drive
Sacramento, California 95828 USA

Telephone (916) 383-1177
Fax (916) 383-1182



Customer: WLJT-TV (Main)
Channel: 27

Model: JA/MS-24/27 TEO
Description: UHF Slot Antenna
Notes: Elliptically Polarized, V-Pol



6340 Sky Creek Drive
Sacramento, California 95828 USA

Telephone (916) 383-1177
Fax (916) 383-1182

<u>AZIMUTH</u>	<u>FIELD</u>	<u>dB</u>
0	0.650	-3.74
10	0.645	-3.81
20	0.641	-3.86
30	0.631	-4.00
40	0.619	-4.17
50	0.604	-4.38
60	0.586	-4.64
70	0.567	-4.93
80	0.547	-5.24
90	0.530	-5.51
100	0.514	-5.78
110	0.505	-5.93
120	0.502	-5.99
130	0.504	-5.95
140	0.511	-5.83
150	0.519	-5.70
160	0.526	-5.58
170	0.531	-5.50
180	0.532	-5.48
190	0.531	-5.50
200	0.526	-5.58
210	0.519	-5.70
220	0.511	-5.83
230	0.504	-5.95
240	0.502	-5.99
250	0.505	-5.93
260	0.514	-5.78
270	0.530	-5.51
280	0.547	-5.24
290	0.567	-4.93
300	0.586	-4.64
310	0.604	-4.38
320	0.619	-4.17
330	0.631	-4.00
340	0.641	-3.86
350	0.650	-3.74

Customer: WLJT-TV (Main)
Channel: 27

Model: JA/MS-24/27 TEO
Description: UHF Slot Antenna
Notes: Elliptically Polarized, V-Pol